

CLAIMS:

1. An optical recording medium comprising a substrate, a protective layer and a plurality of information recording layers between the substrate and the protective layer and capable of recording data in the plurality of information recording layers and reproducing data recorded in the plurality of information recording layers by projecting a laser beam via a light incidence plane constituted by one of the surfaces of the substrate and protective layer onto the plurality of information recording layers, at least one information recording layer other than a farthest information recording layer from the light incidence plane among the plurality of information recording layers including at least one recording film, a first dielectric film located on the side of the light incidence plane with respect to the at least one recording film and containing an oxide as a primary component and added with nitrogen, and a second dielectric film located on the opposite side of the light incidence plane with respect to the at least one recording film and having a lower thermal conductivity than that of the first dielectric film.
2. An optical recording medium in accordance with Claim 1, wherein the first dielectric film contains Ta_2O_5 or TiO_2 as a primary component.
3. An optical recording medium in accordance with Claim 1, wherein the second dielectric film is formed of a mixture of ZnS and SiO_2 .
4. An optical recording medium in accordance with Claim 1, wherein the at least one information recording layer is constituted by a first recording film containing one element selected from the group consisting of Si, Ge, Sn, Mg, In, Zn, Bi and Al as a primary component and a second

recording film provided in the vicinity of the first recording film and containing one element selected from the group consisting of Cu, Al, Zn, Ti and Ag and different from the element contained in the first recording film as a primary component and when the laser beam is projected, the element contained in the first recording film as a primary component and the element contained in the second recording film as a primary component are mixed with each other, thereby forming a record mark.

5. An optical recording medium in accordance with Claim 2, wherein the at least one information recording layer is constituted by a first recording film containing one element selected from the group consisting of Si, Ge, Sn, Mg, In, Zn, Bi and Al as a primary component and a second recording film provided in the vicinity of the first recording film and containing one element selected from the group consisting of Cu, Al, Zn, Ti and Ag and different from the element contained in the first recording film as a primary component and when the laser beam is projected, the element contained in the first recording film as a primary component and the element contained in the second recording film as a primary component are mixed with each other, thereby forming a record mark.

6. An optical recording medium in accordance with Claim 3, wherein the at least one information recording layer is constituted by a first recording film containing one element selected from the group consisting of Si, Ge, Sn, Mg, In, Zn, Bi and Al as a primary component and a second recording film provided in the vicinity of the first recording film and containing one element selected from the group consisting of Cu, Al, Zn, Ti and Ag and different from the element contained in the first recording film as a primary component and when the laser beam is projected, the

element contained in the first recording film as a primary component and the element contained in the second recording film as a primary component are mixed with each other, thereby forming a record mark.

5 7. An optical recording medium in accordance with Claim 4, wherein the second recording film is formed so as to be in contact with the first recording film.

8. An optical recording medium in accordance with Claim 5, wherein
10 the second recording film is formed so as to be in contact with the first recording film.

9. An optical recording medium in accordance with Claim 6, wherein
15 the second recording film is formed so as to be in contact with the first recording film.

10. An optical recording medium in accordance with Claim 4, wherein the first recording film contains Si as a primary component and the second recording film contains Cu as a primary component.

20 11. An optical recording medium in accordance with Claim 5, wherein the first recording film contains Si as a primary component and the second recording film contains Cu as a primary component.

25 12. An optical recording medium in accordance with Claim 6, wherein the first recording film contains Si as a primary component and the second recording film contains Cu as a primary component.

13. An optical recording medium in accordance with Claim 4, wherein at least one element selected from the group consisting of Al, Zn, Sn, Mg and Au and different from the element contained in the second information recording layer as a primary component is added to the second recording film.

14. An optical recording medium in accordance with Claim 5, wherein at least one element selected from the group consisting of Al, Zn, Sn, Mg and Au and different from the element contained in the second information recording layer as a primary component is added to the second recording film.

15. An optical recording medium in accordance with Claim 6, wherein at least one element selected from the group consisting of Al, Zn, Sn, Mg and Au and different from the element contained in the second information recording layer as a primary component is added to the second recording film.

16. An optical recording medium in accordance with Claim 10, wherein at least one element selected from the group consisting of Al, Zn, Sn, Mg and Au and different from the element contained in the second information recording layer as a primary component is added to the second recording film.

17. An optical recording medium in accordance with Claim 11, wherein at least one element selected from the group consisting of Al, Zn, Sn, Mg and Au and different from the element contained in the second information recording layer as a primary component is added to the

second recording film.

18. An optical recording medium in accordance with Claim 12,
wherein at least one element selected from the group consisting of Al, Zn,
5 Sn, Mg and Au and different from the element contained in the second
information recording layer as a primary component is added to the
second recording film.

19. An optical recording medium in accordance with Claim 4, wherein
10 the protective layer is formed of a light transmittable material and the
laser beam is projected onto the plurality of information recording layers
via the protective layer.

20. An optical recording medium in accordance with Claim 5, wherein
15 the protective layer is formed of a light transmittable material and the
laser beam is projected onto the plurality of information recording layers
via the protective layer.

21. An optical recording medium in accordance with Claim 6, wherein
20 the protective layer is formed of a light transmittable material and the
laser beam is projected onto the plurality of information recording layers
via the protective layer.

22. An optical recording medium in accordance with Claim 10,
25 wherein the protective layer is formed of a light transmittable material
and the laser beam is projected onto the plurality of information recording
layers via the protective layer.

23. An optical recording medium in accordance with Claim 11, wherein the protective layer is formed of a light transmittable material and the laser beam is projected onto the plurality of information recording layers via the protective layer.

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24. An optical recording medium in accordance with Claim 12, wherein the protective layer is formed of a light transmittable material and the laser beam is projected onto the plurality of information recording layers via the protective layer.

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